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(54) Abstract Title
Remote education via an internet

(57) Remote education is provided via an internet which has been widely used as an information network. It has an open structure which is not influenced by particular hardware, or software such as an operating system or a web browser. A remote education provider can construct a remote education server with the minimum cost and time. Also, users easily connect to the remote education server via the internet to then receive a remote education service. The remote education server providing an educational program includes individual learning progress according to a learning evaluation and a performance management function, and performs a discriminative education according to capability of each individual.

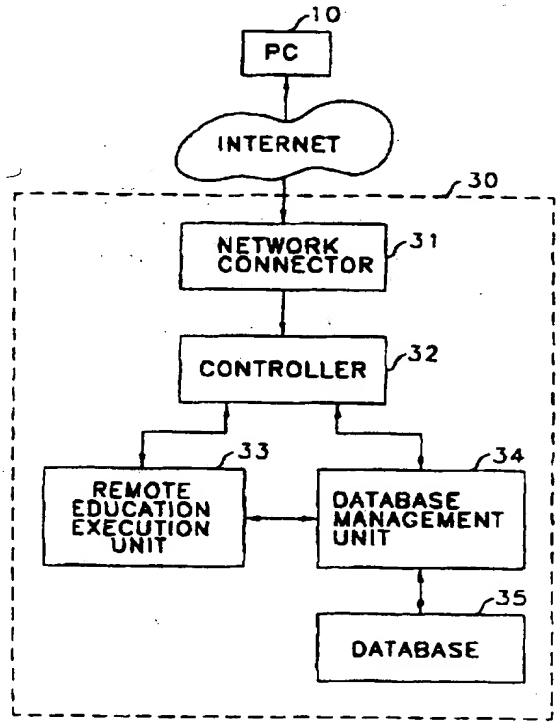

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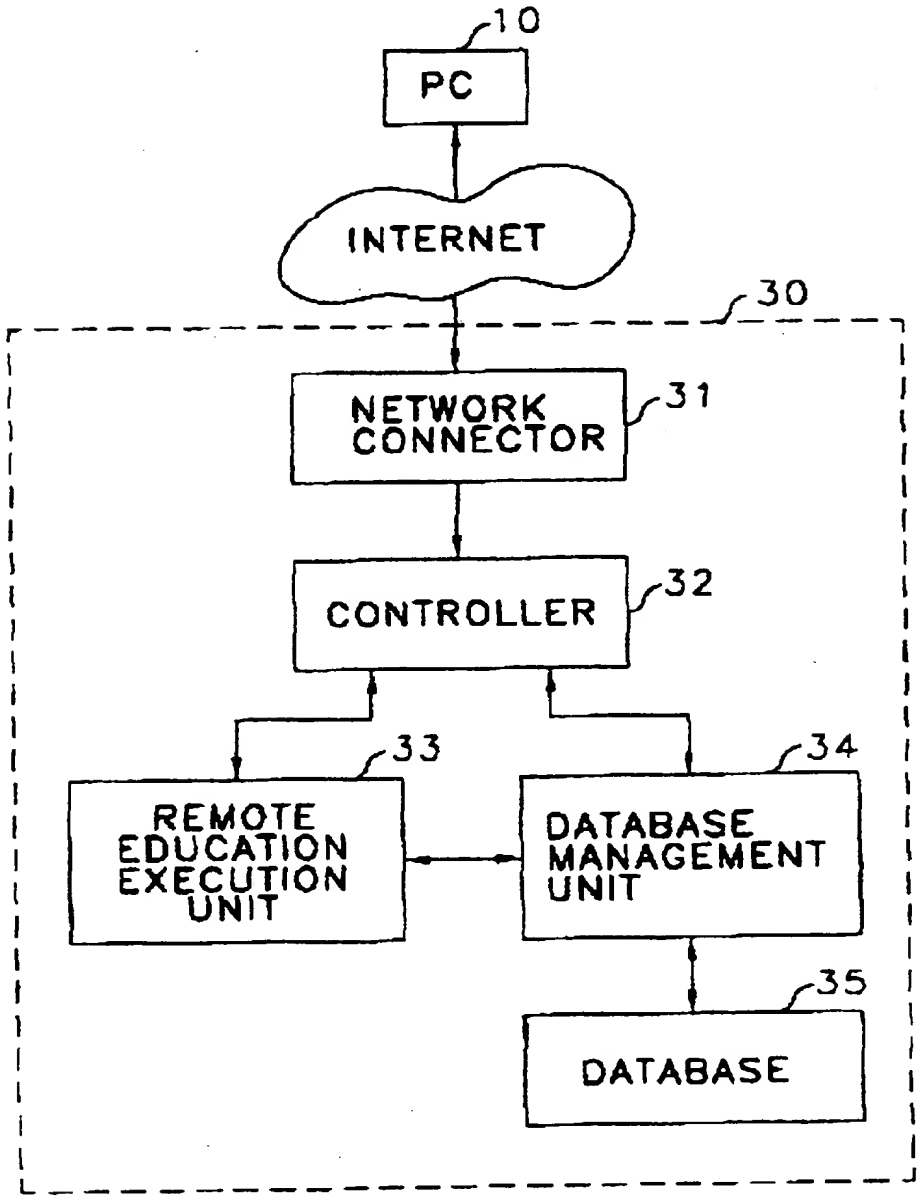
FIGURE


10
PC
INTERNET
30
NETWORK CONNECTOR
31
CONTROLLER
32
33
34
REMOTE EDUCATION EXECUTION UNIT
DATABASE MANAGEMENT UNIT
35
DATABASE

REMOTE EDUCATION METHOD AND APPARATUS VIA AN INTERNET

The present invention relates to a remote education method and apparatus via an internet.

A generally known remote education is performed by an educational broadcast via a radio wave or a cable, which is performed via a TV on a predetermined timetable. Another remote education is performed using video media. Such a remote education using video media is carried out in a video conference system in which a teacher and an educatee view each other via the video media. Still another remote education is performed through a general network, in which a dedicated videophone system and a whiteboard system which can share data via computers linked via a LAN (local area network) or a WAN (wide area network), are used to instantly communicate video and graphic data with each other.

However, the above-described conventional remote education methods cause users to be restricted by time and places. Also, it is difficult to increase the number of users and prepare a variety of educational contents. Further, learning results of users have not been evaluated and managed.

With a view to solve or reduce the above problems, it is an aim of preferred embodiments of the present invention to provide a remote eduction method via an internet for evaluating and analyzing individual learning results and managing educational result information of each individual.

According to a first aspect of the present invention, there is provided a remote education method using an

internet, the remote education method comprising the steps of:

(a) receiving a name and a password of a user and identifying whether the name and password are listed in a registered user list;

(b) transmitting a remote education home page in which a menu for requesting the identified user to input personal information and learning procedures for guiding the user to select one of desired learning procedures are introduced;

(c) providing learning data corresponding to the learning procedure selected by the user;

(d) providing evaluation data corresponding to the provided learning data to evaluate a learning result of the user;

(e) analyzing the evaluation result with respect to the evaluation data and providing a learning direction to the user; and

(f) individually storing remote educational result information such as the evaluation result and the learning direction according to the evaluation result of the user.

Preferably, said step (a) comprises the step of transmitting a registering page to the user when the user is not listed in a registered user list.

Said step (c) preferably comprises the step of searching the learning data corresponding to the learning procedure selected in the remote education home page among

a database which prestores various learning data, and providing the searched result to the user.

Said step (d) preferably comprises the step of searching the evaluation data corresponding to the learning data analysis result from a database and providing the searched result to the user.

Preferably, said step (f) comprises the step of individually storing the remote education result information such as the evaluation result and the learning direction according to the evaluation result, considering the user personal information input in the remote education home page.

Said remote education result information may be individually stored to be used as materials for managing a next learning procedure and progress.

It is another aim of the present invention to provide a remote education apparatus via an internet, which includes a server executing a remote education and a personal computer which is connected to the server to receive the remote education.

According to a second aspect of the present invention, there is provided a remote education apparatus via an internet, the remote education apparatus comprising:

a personal computer (PC) which can be connected to the internet; and a server for prestoring a variety of learning data and evaluation data corresponding to the learning data, and providing the learning data and the evaluation data to the PC of a registered user.

Said server preferably comprises: a controller; a network connector which can be connected to the internet; a database for prestoring the various learning data and the evaluation data with respect to the learning data, and storing individual remote education educational result information; a remote education execution unit, receiving the learning data and the evaluation data prestored in the database, for making up a learning page to execute the remote education, an evaluation page to evaluate the learning result and a resultant page with respect to the evaluation, and for driving a remote education program; and a database management unit for storing in the database and managing the individual remote education result information according to the learning result executed in the remote education execution unit such as an evaluation result and a learning direction according to the evaluation result.

According to a third aspect of the invention, there is provided an apparatus for performing a remote education method using an internet, the apparatus comprising: internet communication apparatus provided at the location of an educatee to receive name and password of an educatee and transmit said name and password to a remote location and for receiving from the remote location a remote education home page for carrying out a learning procedure, as well as receiving learning data corresponding to the learning procedure; and a server holding a prestored variety of learning data and evaluation data corresponding to the learning data and for interacting with responses given by the educatee.

The apparatus may further comprise any one or more features from the accompanying claims, description, abstract or drawings, in any combination.

For a better understanding of the invention, and to show how embodiments of the same may be carried into effect, reference will now be made, by way of example, to the accompanying diagrammatic drawing, in which:

Figure 1 is a block diagram showing a remote education apparatus via an internet according to a preferred embodiment of the present invention.

A preferred embodiment of the present invention will be described with reference to the accompanying drawing.

A remote education apparatus via an internet includes a personal computer (PC) 10 being an educatee unit via which education is provided and a server 30 being an educator unit via which remote education is executed. The server 30 includes a network connector 31 which is connected to an internet host computer. A controller 32 controls respective units so that remote education is performed according to user information applied from the internet host computer via the network connector 31. A remote education execution unit 33 provides a user with learning data which is connected via the internet, and provides evaluation data corresponding to the provided learning data, to thereby execute a remote education program for analyzing the learning result. A database management unit 34 manages database with respect to the learning contents executed in the remote education execution unit 33. A database 35 prestores a variety of data with respect to the learning contents, such as learning data and evaluation data. The remote education execution unit 33 operates by linking with the database management unit 34.

First, the server 30 is connected to the internet via the network connector 31. The controller 32 sets an internet protocol (IP) address and a domain name which is called an internet site, to enable hosts on the internet to connect via the IP or the domain name. That is, an internet address is set. A user connects the PC 10 to a host on the internet and inputs an internet address of the server 30. The controller 32 requests the name and password of the user. The controller 32 judges whether the input name and password are recorded in a registered user list. If the user is listed in the registered user list, the controller 32 transmits a remote education home page to start a remote education service. However, if the user is not listed in the registered user list, a registering picture is transmitted. An unregistered user can be listed in the registered user list via the registering picture, to then receive a remote education home page. The remote education home page corresponds to a start page of a program for receiving remote education on the internet, in which a menu for inputting personal information of a user listed in the registered user list and learning procedures for guiding the user to select one of the desired learning procedures. Here, the user personal information is used for individual information for managing individual learning results. The user selects a desired learning procedure. The controller 32 controls the remote education execution unit 33 and the database management unit 34 so that the learning data corresponding to the selected learning procedure is provided to the PC 10 being an educatee via the internet. The database management unit 34 searches the learning data corresponding to the learning procedure selected by the user among a variety of learning data stored in the database 35, and outputs the searched result to the remote eduction execution unit 33. The remote education

execution unit 33 makes up an educational page showing the input learning data and provides the educational page to the user. Here, learning data is provided as a moving picture, a still picture, a sound and so on. If the learning is completed, the remote education execution unit 33 analyzes the completed learning data and outputs the result to the database management unit 34. The database management unit 34 searches the evaluation data corresponding to the learning data analysis result from the database 35, and outputs the searched result to the remote education execution unit 33. The remote education execution unit 33 makes up an evaluation page providing the estimation data applied from the database management unit 34 and provides the evaluation page to the user. The user takes a test on the learned contents via the evaluation page. When the test if finished, the remote education execution unit 33 receives and looks over the tested data to evaluate the test result. The remote education execution unit 33 analyzes the evaluation result and sets learning direction according to the evaluation result. The remote education execution unit 33 transmits a resultant page showing the evaluation result and the learning direction. The database management unit 34 receives the remote education result information such as the evaluation result and the learning direction from the remote education execution unit 33 and stores them in the database 35. In this case, the database management unit 34 stores each individual remote education result information in the database 35 considering the user personal information input in the remote education home page so that an individual education according to capability of each user can be performed discriminatively.

As described above, the remote education method and apparatus via an internet has an open structure which is

not influenced by a particular hardware, or software such as an operating system or a web browser. A remote education provider can construct a remote education server with the minimum cost and time. Also, users connect the remote education server via an internet to receive a remote education service. The remote education server includes a learning evaluation function as well as provides learning information, to manage individual learning progress and a next educational program. Thus, the present invention can educate users according to the capability of each individual.

While only certain embodiments of the invention have been specifically described herein, it will be apparent that numerous modifications may be made thereto without departing from the scope of the invention.

The reader's attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and which are open to public inspection with this specification, and the contents of all such papers and documents are incorporated herein by reference.

All of the features disclosed in this specification (including any accompanying claims, abstract and drawings), and/or all of the steps of any method or process so disclosed, may be combined in any combination, except combinations where at least some of such features and/or steps are mutually exclusive.

Each feature disclosed in this specification (including any accompanying claims, abstract and drawings), may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly

stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

The invention is not restricted to the details of the foregoing embodiment(s). The invention extends to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying claims, abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.

CLAIMS

1. A remote education method using an internet, the remote education method comprising the steps of:

(a) receiving a name and a password of a user and identifying whether the name and password are listed in a registered user list;

(b) transmitting a remote education home page in which a menu for requesting the identified user to input personal information and learning procedures for guiding the user to select one of desired learning procedures are introduced;

(c) providing learning data corresponding to the learning procedure selected by the user;

(d) providing evaluation data corresponding to the provided learning data to evaluate a learning result of the user;

(e) analyzing the evaluation result with respect to the evaluation data and providing a learning direction to the user; and

(f) individually storing remote educational result information such as the evaluation result and the learning direction according to the evaluation result of the user.

2. The remote education method according to claim 1, wherein said step (a) comprises the step of transmitting a registering page to the user when the user is not listed in a registered user list.

3. The remote education method according to claim 1 or 2, wherein said step (c) comprises the step of searching the learning data corresponding to the learning procedure selected in the remote education home page among a database which prestores various learning data, and providing the searched result to the user.

4. The remote education method according to claim 1, 2 or 3, wherein said step (d) comprises the step of searching the evaluation data corresponding to the learning data analysis result from a database and providing the searched result to the user.

5. The remote education method according to any of the preceding claims wherein said step (f) comprises the step of individually storing the remote education result information such as the evaluation result and the learning direction according to the evaluation result, considering the user personal information input in the remote education home page.

6. The remote education method according to claim 5, wherein said remote education result information is individually stored to be used as materials for managing a next learning procedure and progress.

7. A remote education apparatus via an internet, the remote education apparatus comprising:

a personal computer (PC) which can be connected to the internet; and

a server for prestoring a variety of learning data and evaluation data corresponding to the learning data,

and providing the learning data and the evaluation data to the PC of a registered user.

8. The remote education apparatus according to claim 7, wherein said server comprises:

a controller;

a network connector which can be connected to the internet;

a database for prestoring the various learning data and the evaluation data with respect to the learning data, and storing individual remote education educational result information;

a remote education execution unit, receiving the learning data and the evaluation data prestored in the database, for making up a learning page to execute the remote education, an evaluation page to evaluate the learning result and a resultant page with respect to the evaluation, and for driving a remote education program; and

a database management unit for storing in the database and managing the individual remote education result information according to the learning result executed in the remote education execution unit such as an evaluation result and a learning direction according to the evaluation result.

9. Apparatus for performing a remote education method using an internet, the apparatus comprising:

internet communication apparatus provided at the location of an educatee to receive name and password of an educatee and transmit said name and password to a remote location and for receiving from the remote location a remote education home page for carrying out a learning procedure, as well as receiving learning data corresponding to the learning procedure; and

a server holding a prestored variety of learning data and evaluation data corresponding to the learning data and for interacting with responses given by the educatee.

10. Apparatus according to claim 9, further comprising any one or more features from the accompanying claims, description, abstract or drawings, in any combination.

11. A remote education method substantially as herein described with reference to the Figure.

12. A remote education apparatus substantially as herein described with reference to the Figure.

The Patent Office

14

Application No: GB 9722047.9 **Examiner:** Mike Davis
Claims searched: 1-12 **Date of search:** 8 May 1998

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.P): G4A (AUXX, AUDB)

Int Cl (Ed.6): G06F

Other: Online: WPI

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X,P	WO 97/36233 A1 (ATHENA TELECOM LAB)	1,7,9 at least

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.